

Commonwealth of Massachusetts Department of Fish and Game

In-Lieu Fee Program 2022 Annual Report



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Table of Contents

	Page
Introduction	1
I. Executive Summary	1
II. ILF Payments, Mitigation Credits Sold and Calendar Year 2022 Financial Account Ledger	3
III. ILFP Mitigation Projects	8
IV. Program Development Update	13
V. DMF ILFP Project Updates	14
<u>Appendix A</u> ILFP Map – Service Area boundaries, locations of impacts for which ILF payments were made & locations of existing and proposed ILFP mitigation projects	15
<u>Appendix B</u> Complete Listing of ILFP Payments Received and Mitigation Credits Sold	16

Introduction

The In-Lieu Fee Program (“ILFP”) of the Massachusetts Department of Fish and Game (“DFG”) was established in May 2014. The U.S. Army Corps of Engineers (“Corps”) approved DFG to be the sponsor of a statewide program that would provide In-Lieu Fee compensatory mitigation associated with Corps permits under §404 of the Clean Water Act and/or §§9 or 10 of the Rivers and Harbors Act of 1899 and related federal rule at 33 C.F.R. Part 332 (the federal Mitigation Rule). Specifically, on May 23, 2014 the Corps and DFG signed an Instrument developed by DFG that set forth a comprehensive description of how DFG will administer its ILFP in Massachusetts. The ILFP is administered by the DFG Commissioner’s Office in collaboration with the Department’s Division of Marine Fisheries (“DMF”), Division of Fisheries and Wildlife (“MassWildlife”) and Division of Ecological Restoration (“DER”).

The availability of DFG’s ILFP allows permittees, with the Corps’ approval, to make a monetary payment in compensation for project impacts to aquatic resources of the U.S. in Massachusetts, in-lieu of on-site mitigation. When these In-Lieu Fee (“ILF”) payments are made to the ILFP, DFG assumes legal responsibility for implementing the required mitigation, which it does by aggregating and expending the ILF payments on approved mitigation projects. The ILFP goals include implementing in-kind mitigation in the same geographical area where impacts occurred. For the purposes of the ILFP, Massachusetts is divided into geographic Service Areas. Appendix A of this report includes a map showing the boundaries of ILF Service Areas and the locations of all permitted impacts for which an ILF payment has been made (from 5/23/14 – 12/31/22).

This calendar year (“CY”) 2022 Annual Report is provided in accordance with Section XVIII of the ILFP Instrument, which requires that DFG submit an annual report that includes information on each Corps-permitted project for which an ILF payment was made to DFG, the ending balance of ILFP credits advanced and released at the end of the annual reporting period for each Service Area, and a related financial accounting ledger. Appendix B includes information on all ILF payments and credits tracked from the date of the establishment of the DFG ILFP on May 23, 2014 through December 31, 2022. Section II of this report includes the ending balance of credits (Table 3) and financial account ledger (Table 4). This report also provides an update on ILF mitigation project implementation (Section III), program development plans (Section IV), and DMF ILF projects that were approved under a Memorandum of Agreement with the Corps, prior to the 2014 ILFP Instrument (Section V).

I. Executive Summary

Since the DFG’s ILFP was established in May of 2014, 88 Corps permittees have made an ILF payment to the program (through 12/31/22) for 111 Corps-permitted projects. The payments received by DFG since the ILFP was established total \$7,318,370. These payments were required to provide compensatory mitigation for impacts to 11.012 acres of wetlands and 1,215 linear feet of river and stream. Tables 1a. and 1b. below include a summary of freshwater and tidal mitigation credits sold and ILF payments received since program establishment.

During CY 2022 (01/01/2022 - 12/31/2022), DFG's ILFP received thirteen payments from permittees who were required by the Corps to make an ILF payment. DFG received ILF payments totaling \$945,663 in CY 2022, for a total program revenue of \$7,318,370¹. The 2022 ILF payments were required to compensate for impacts to 1.399 acres of wetland resources and 280 linear feet of river and stream. Table 2 provides a summary of these CY 2022 payments and the corresponding credits sold statewide and within each Service Area.

The Corps approved partial release of credits for several MA ILF mitigation projects in CY 2022. See Table 3 for a summary of mitigation credits advanced, sold, and ending balance by Service Area. Implementation of the first MA ILF mitigation project, an eelgrass restoration project, began in CY 2017 when DFG's Division of Marine Fisheries (DMF) planted half of an acre of eelgrass in Salem Sound. Additional planting occurred in 2018, and the project completed its final year of monitoring for the original planting and its fourth year of monitoring for the supplemental planting in 2022. Sixty-five percent, or 0.325, of the total project credits were released in 2021 for completing the planting and monitoring. No additional credits have been released for DMF's artificial reef in Nantucket Sound since the first forty percent, or 0.2796, of the total credits associated with the project were released in 2020 for completion of the installation. Monitoring of the reef continues and DFG anticipates requesting additional credit release in the future after ecological performance standards are achieved. Nantucket Conservation Foundation initiated its oyster reef and salt marsh restoration project in 2021. The ILFP requested the release of 0.0775 wetlands credits, representing 30% of the total potential 0.258 wetland credits. Three mitigation project previously approved by the Corps and another three projects approved in CY 2022 are underway. A summary of these projects is provided below in Section III.

The total expenditure of ILFP revenue by the end of CY 2022 amounted to \$1,936,501, of which \$1,750,147 was for mitigation project implementation and the balance was for program administration.

This Annual Report includes a CY 2022 ILFP financial account ledger (Table 4) showing beginning and ending balances for the calendar year, with a summary of ILF payments received for each Service Area and a summary of expenditures for mitigation projects and administrative expenses. The ILFP continues to track all ILF payments received, and credits sold by Service Area and by type of resource impact. See Appendix B for a listing of all ILF payments received (5/23/14 - 12/31/22) with corresponding details on permittee, Corps permit number, geographic location, and the type of resource impact for which an ILF payment was required. Some ILF payments were for multiple resource impacts, and these fees are broken out in Appendix B to reflect the payment for each type of resource impact. Additionally, some permittees have made payments for multiple projects. Therefore, the total number of records (132) in Appendix B is greater than the

¹ Total ILFP receipts were \$440 less than the total ILF payment amount required by Corps permits due to two errors: 1) on a permittee check, amount paid was \$12,260 instead of the required \$12,620 and 2) on a DFG deposit where check was correctly made out for \$4,991 but deposit amount was \$4,911.

total number of permittees (88) or Corps-permitted projects (111) for which an ILFP payment was made.

II. ILF Payments, Mitigation Credits Sold, and Calendar Year 2022 Financial Account Ledger

A total of 11.012 wetland credits and 1,215 stream credits have been sold since the establishment of the ILFP in 2014. Wetland ILF payments and associated credit sales are calculated based on the area (square feet, acres) of impact. The sale of 11.012 wetlands credits represents ILF payments made in compensation for a total of 11.012 acres of wetlands impact. Stream credits are calculated based on linear feet of impact. The sale of 1,215 stream credits reflects the receipt of ILF payments for impact to 1,215 linear feet of riverine aquatic resources. One stream credit is equivalent to one linear foot of stream including both banks and stream channel (e.g., impacts to one linear foot of stream on right bank only would require purchase of 0.33 stream credits). Table 1a below provides a summary of the amount of freshwater and tidal wetlands and stream credits that were sold within each ILF Service Area since the establishment of the ILFP through December 31, 2022. Table 1b provides further detail for the three Coastal sub-areas.

TABLE 1a. ILFP Service Areas: Summary of Freshwater and Tidal Mitigation Credits Sold and ILF Payments Received Since Program Establishment

Service Area	Credits Sold		Total ILF Payments Received (5/23/14 – 12/31/22)
	Wetlands Credits	Stream Credits	
Berkshire/Taconic Service Area			
Freshwater	0.00	75.33	\$22,600
Connecticut River Service Area			
Freshwater	0.454	206.76	\$333,683
Quabbin/Worcester Service Area			
Freshwater	0.796	482.00	\$621,356
Coastal Service Area			
			\$6,340,730
Freshwater	3.952	447.36	\$2,724,416
Tidal	5.810	3.3	\$3,616,314
TOTAL	11.012	1,215	\$7,318,370
Freshwater	5.202	1,211.5	3,702,056
Tidal	5.810	3.30	3,616,314

TABLE 1b. Coastal Service sub-areas: Summary of Freshwater and Tidal Mitigation Credits Sold and ILF Payments Received Since Program Establishment

Coastal Service Area sub-areas	Credits Sold		Total ILF Payments Received (5/23/14 – 12/31/22)
	Wetlands Credits	Stream Credits	
North sub-area			
Freshwater	0.937	244.36	\$729,155
Tidal	4.600	3.3	\$2,858,698
Central sub-area			
Freshwater	0.714	64.00	\$482,104
Tidal	0.250	0.0	\$154,697
South sub-area			
Freshwater	2.302	139.0	\$1,513,158
Tidal	0.960	0.0	\$602,999

Table 2 below summarizes credits sold and payments received in CY 2022 by Service Area and statewide.

TABLE 2. Calendar Year 2022 ILF Payments Received and Credits Sold

ILF Service Area	2022 Wetland Credits Sold	2022 Stream Credits Sold	2022 ILF Payments Received (01/01/22 – 12/31/22)
Berkshire/ Taconic	0.00	0.00	\$0
Connecticut River	0.00	0.00	\$0
Quabbin/Worcester	0.482	280.00	\$372,276
Coastal-North	0.351	0.00	\$218,649
Coastal-Central	0.001	0.00	\$727
Coastal-South	0.565	0.00	\$354,011
2022 Statewide Total	1.399	280.00	\$945,663

When the ILFP was established in 2014, advanced credits were allocated to the Service Areas. Table 3 below outlines credits advanced, sold, released, and the ending credit balance for CY 2022.

TABLE 3. Calendar Year 2022 Ending Balance of Credits by ILF Service Area.

ILF Service Area	Credits Advanced		Credits Sold		Credits Released ²		2022 Ending Balance (12/31/22)	
	Wetland	Stream	Wetland	Stream	Wetland	Stream	Wetland	Stream
Berkshire/Taconic	50	5,741	0	75.33	0.2	220	50.2	5,885
Connecticut River	50	2,500	0.454	206.76	0	0	49.55	2,293
Quabbin/Worcester	52	2,500	0.796	482	2.157	300	53.36	2,318
Coastal	130 ³	162,819	9.762	450.66	14.493	625.51	134.731	162,994
Statewide Total	282	173,560	11.012	1,215	16.85	1,145.51	287.838	173,490

The Financial Account Ledger for CY 2022 is presented in Table 4 below (4A – 4E). Program expenditures in CY 2022 were used for ILFP administrative costs and project implementation costs including monitoring and reporting on the Salem Sound eelgrass restoration, Yarmouth reef, and Nantucket reef projects; the development of the eelgrass restoration site selection model; the design of a cranberry bog restoration in Mashpee; eelgrass planting in Nantucket; and land acquisition in Barre.

² Credits released for the Coastal Service Area includes 3.733 wetland credits and 25.2 stream credits released from pre-2014 DMF ILF projects.

³ Prior annual reports inaccurately noted advanced credits as “50” in the Coastal Service Area. However, as indicated in the MA ILFP Instrument, 130 advance credits were allocated to the Coastal Service Area.

TABLE 4. MA ILFP Financial Account Ledger

4A. MA ILFP Revenue by Service Area

ILFP Service Area	Beginning Balance [Payments Received 5/23/14 - 12/31/21]	CY 2022 Payments [1/1/22 - 12/31/22]	Total ILF Payment Revenue 5/23/14 - 12/31/22
Berkshire/Taconic	\$22,600	\$0	\$22,600
Connecticut River	\$333,683	0	\$333,683
Quabbin/Worcester	\$249,081	372,276	\$621,357
Coastal	\$5,767,343	\$573,387	\$6,340,730
Coastal-North	\$3,369,204	218,649	\$3,587,853
Coastal Central	\$635,994	\$727	\$636,721
Coastal South	\$1,762,145	354,011	\$2,116,156
subtotal	\$6,372,707	\$945,663	\$7,318,370

4B. Allocation of ILF Payment Revenue to Mitigation Project Implementation and Program Administration

ILFP Service Area	Total ILF Payments Received (5/23/14 - 12/31/22)	Mitigation Project Implementation (82.5%)	ILF Program Administration (17.5%)
Berkshire/Taconic	\$22,600	\$18,645	\$3,955
Connecticut River	\$333,683	\$275,289	\$58,395
Quabbin/Worcester	\$621,357	\$512,620	\$108,737
Coastal	\$6,340,730	\$5,231,102	\$1,109,628
Coastal-North	\$3,587,853	\$2,959,979	\$627,874
Coastal Central	\$636,721	\$525,295	\$111,426
Coastal South	\$2,116,156	\$1,745,829	\$370,327
subtotal	\$7,318,370	\$6,037,655	\$1,280,715

4C. MA ILF Mitigation Project Funds and Expenditures by Service Area [5/23/14 - 12/31/22]

ILFP Service Areas	Mitigation Project Funds 82.5% of total ILF Payments	Total Project Expenditures	Ending Balance ⁴ Mitigation Project Funds 12/31/22
Berkshire/Taconic Service Area	\$18,645	\$13,447	\$5,198
Connecticut River Service Area	\$275,289	\$3,500	\$271,789
Quabbin/Worcester Service Area	\$512,620	\$205,492	\$307,129
Coastal Service Area	\$5,231,102	\$1,527,709	\$3,703,393
<i>North sub-area</i>	\$2,959,979	\$556,323	\$2,403,656
<i>Central sub-area</i>	\$525,295	\$0	\$525,295
<i>South sub-area</i>	\$1,745,829	\$971,386	\$774,443
Total	\$6,037,656	\$1,750,147	\$4,287,509

4D. MA ILF Program Administration Funds and Expenditures - State-Wide [05/23/14 - 12/31/22]

ILFP Service Areas	Administration Funds 17.5% of ILF Payments	Total Program Administration Expenditures ⁵	Ending Balance Program Administration Funds
All Service Areas - Statewide	\$1,280,715	\$186,354	\$1,094,361

4E. MA ILF Program Financial Summary

	Mitigation Project Funds ³	Administration Funds	TOTAL
Revenue	\$6,037,656	\$1,280,715	\$7,318,371
Expenditures	\$1,750,147	\$186,354	\$1,936,501
Balance	\$4,287,509	\$1,094,361	\$5,381,870

⁴ \$1,484,986 of the 12/31/22 Ending Balance is committed to ILF projects awarded funding prior to 12/31/2022

⁵ Administration funds were used for ILF Program staffing - Program Administrator and ILF Aquatic Mitigation Specialist. DFG also funded portions of the ILFP staff salaries with other non-ILF DFG funds.

III. ILFP Mitigation Projects

TABLE 5. Project Status Summary

DFG#	ILF Project	Project Status
IL01	Eelgrass Restoration, Salem Sound	Final Mitigation Plan and Year 4 monitoring complete
IL02	Nemasket River Preservation, Middleboro	Final Mitigation Plan and Year 2 monitoring complete, protection instruments in place
IL03	Williams River Preservation	Final Mitigation Plan and Year 2 monitoring complete, protection instruments in place
IL04	Town Farm_Greens Point Preservation, Ipswich	Final Mitigation Plan and Year 2 monitoring complete, protection instruments in place
IL05	Yarmouth Reef_Marine Habitat Enhancement	Final Mitigation Plan and reef deployment complete, Year 3 monitoring underway
IL06	Willowdale Dam Fishway, Ipswich	Withdrawn
IL07	Parker River Connector Preservation, Newbury	Final Mitigation Plan and Year 1 monitoring complete, protection instruments in place
IL08	Eelgrass Restoration, Site Suitability and Test Planting	Phase 1 and 2 of site suitability studies underway. Draft mitigation plan submitted
IL09	Lyons Brook Coldwater Stream Preservation, Westport	Final Mitigation Plan and Year 2 monitoring complete, protection instruments in place
IL11	Chop Chaque Cranberry Bog Restoration, Mashpee	Draft mitigation plan submitted. Construction anticipated in 2023
IL12	Plymouth Bog Preservation	Withdrawn
IL13	Plum Brook Restoration, Amherst	Withdrawn
IL14	Gionet Preservation, Barre	Final Mitigation Plan and protection instrument complete
IL15	Nantucket Oyster Reef and Salt Marsh Enhancement	Final Mitigation Plan and oyster reef in place, Year 1 monitoring underway
IL16	Pye Brook Weir Removal, Topsfield/Ipswich	Accepted as a mitigation project based on Corps Initial Evaluation. Mitigation plan to be developed
IL17	Nantucket Eelgrass Restoration, Nantucket Harbor	Eelgrass planting initiated, final mitigation plan and post-planting report submitted
IL18	Blackwater Memorial Forest Wetland Restoration, Kingston	Project design underway. Draft mitigation plan to be submitted in 2023
IL19	Barnstable Great Marsh Restoration, Barnstable	Project design underway. Draft mitigation plan to be submitted in 2023
IL20	Scantic River Preservation, Hampden	Site protection instrument underway. Draft mitigation plan to be submitted in 2023

IL01. Eelgrass Restoration Project, Salem Sound

The Division of Marine Fisheries (DMF) eelgrass restoration project was approved by the Corps in 2017 and awarded \$262,092 in ILF funding. The project is restoring eelgrass meadows in the ILFP's Coastal-North Service Area at the Middle Ground site in Salem Sound. The goal of this project is the restoration of ½ acre of eelgrass by 2021. DMF has completed the fourth year of annual monitoring. Restoration success is determined by the persistence and expansion of the planted eelgrass over six years, from 2017 to 2023. Metrics are on the expected restoration trajectory. That is, they have continued to show planting unit survival greater than 50% and an annual increase in density and plot expansion overall. In 2021 all transplant sites increased in morphometrics and expanded in area from the previous year. DMF will monitor the transplant sites again in July 2023, using diver surveys and acoustic mapping to document the full restoration area. A final report will be submitted in 2023. 65% of the credits for this project (0.325 tidal wetlands credits) have been released to date. A 2022 annual monitoring report will be submitted to the Corps under separate cover.

IL02. Nemasket River Preservation, Middleborough, MA

The Corps released the credits for this project in 2021 (2.73 freshwater wetlands credits). A 2022 annual monitoring report will be submitted to the Corps under separate cover.

IL03. Williams River Preservation, West Stockbridge, MA

The Corps released the credits for this project in 2021 (220 stream credits and 0.2 freshwater wetlands credits). A 2022 annual monitoring report will be submitted to the Corps under separate cover.

IL04. Town Farm Road Preservation, Ipswich, MA

The Corps released the credits for this project in 2021, which amounted to 1.614 wetlands credits (1.326 estuarine wetlands and 0.288 upland preservation credits). A 2022 annual monitoring report will be submitted to the Corps under separate cover.

IL05. Marine Habitat Enhancement, Yarmouth Artificial Reef

The Yarmouth artificial reef project in the Coastal-South Service Area will enhance marine sub-tidal habitat in Nantucket Sound for a range of sessile and mobile species. This mitigation project was approved by the Corps in 2019 and awarded \$275,227 in ILF funding. DMF awarded a contract for the deployment of reef materials in 2019. The actual deployment was delayed until January 2020 due to weather. Approximately 2,040 cubic yards of concrete and granite were deployed from three barge loads. The entire site was surveyed using side-scan sonar on January 23, 2020 to verify that the material was deployed in accordance with permit requirements and to more precisely estimate the actual square footage of material that was deployed. The MA ILFP submitted the first annual report and credit release request for this project. The Corps approved release of 40% of the project credits (0.2796 tidal wetlands credits) on November 24, 2020. A 2022 annual monitoring report will be submitted to the Corps under separate cover.

IL06. Willowdale Dam Fishway, Ipswich, MA

This project has been withdrawn because the Project Sponsor has chosen to construct a alternative design (nature-like fishway) at this site using other non-ILFP funding sources.

IL07. Parker River Connector Preservation, Newbury, MA

This multi-parcel mitigation project was approved by the Corps in 2020 and awarded \$234,500 in ILF funding. MA DFG/Division of Fisheries and Wildlife (MassWildlife) Land Protection Program acquired the 14-acre and 20-acre parcels through fee interest acquisition in May and June of 2020. the Essex County Greenbelt Association (ECGB) donated a conservation restriction (CR) for the adjacent 66-acre property to MA DFG. The CR, which is now held by DFG, was recorded November 1, 2021. The 14-acre parcel contains approximately 6.7 acres of upland, 0.2 acres of forested wetland, 2.3 acres of emergent wetland, and 4.6 acres of estuarine intertidal wetland resources. The 20-acre parcel contains 18 acres of estuarine intertidal wetland resources and 2 acres of upland. The 66-acre property contains approximately 21 acres of upland, 45 acres of estuarine intertidal wetlands, and 3,260 linear feet of tidal stream along Cart Creek. These three properties are located within the Great Marsh Area of Critical Environmental Concern and are identified as a MA Natural Heritage and Endangered Species Program (NHESP) Key Site and BioMap 2 Aquatic and Wetland Core habitat, among other designations. Once the CR was recorded, a final mitigation plan and credit release request was submitted to the Corps. A total of 3.187 wetland credits and 300 stream credits were released for this project in 2022. A 2022 annual monitoring report will be submitted to the Corps under separate cover.

IL08. Eelgrass Restoration - Site Suitability Model and Test Planting

This mitigation project, sponsored by DMF, was conditionally approved by the Corps in 2020 with a phased approach to funding and implementation. The project was awarded \$241,585 in ILF funding. The goal of this project is to develop an eelgrass (*Zostera marina*) habitat suitability and transplant site selection tool with targeted test planting at selected sites. DMF will use ILFP funds to develop a preliminary map of potential eelgrass restoration sites based on desktop-accessible data, including historic eelgrass presence, surficial sediment type and water depth as well as conflicting uses. Based on the preliminary map, DMF will select several sites spanning the South, Central and North Coastal Sub-Areas to field-verify model predictions. DMF collected field data at six sites in the Coastal North and Central Sub-Areas in 2021 and five sites in the Coastal South Sub-Area in 2022. In December of 2022, the ILFP submitted a draft mitigation plan identifying seven locations where DMF proposes to plant test plots. The final map and recommendations will inform additional future full-scale eelgrass restoration projects.

IL09. Lyons Brook Preservation, Westport, MA (aka Westport Coldwater Streams)

The Corps released the credits for this project in 2021 (1.97 wetlands credits and 300 stream credits). A 2022 annual monitoring report will be submitted to the Corps under separate cover.

IL11. Chop Chaque Cranberry Bog Restoration, Mashpee, MA

This mitigation project, sponsored by the Town of Mashpee, was conditionally approved by the Corps in 2021 with a phased approach to funding and implementation. The Town owns the project site, an 11.7-acre parcel of land next to Santuit Pond that includes 6.5 acres of retired cranberry

bogs in the ILFP's Coastal-South Service Area. The project was awarded \$15,000 in ILF funding to complete a site reconnaissance study to evaluate the technical feasibility of restoring self-sustaining wetlands on the site and the likely cost of restoring this site. The study was completed in the fall of 2021. The ILFP awarded \$505,000 in additional funding in 2022 to complete this restoration project. The ILFP submitted a draft mitigation plan to the Corps for review in November of 2022. Construction is anticipated to occur in the fall of 2023.

IL12. Plum Brook Culvert Replacement, Amherst, MA

This project has been withdrawn because it was determined that a larger structure would be needed in order to meet stream crossing standards at this location, significantly increasing the total project cost.

IL13. Cranberry Bog Conservation, Plymouth, MA

This project has been withdrawn because the project partners encountered challenges completing a related project that they have sequenced ahead of the ILF project in their strategy for protecting and restoring this area.

IL14. Burnshirt Watershed Conservation, Barre, MA

The Mount Grace Land Conservation Trust was awarded \$205,491 in ILF funds to acquire and permanently protect 40 acres of land in Barre, MA. The land includes 0.44 acres of forested wetlands, a certified vernal pool, 3,453 feet of stream, and 39.67 acres of forest. The property has several special designations, including Zone C Water Supply Protection Area, BioMap 2 Critical Natural Landscape and Core Habitat, and high ecological integrity on the CAPS Index. This is the first project in the ILFP's Quabbin Reservoir/Worcester Plateau Service Area. The property acquisition and recording of the watershed protection restriction were completed in May of 2022. The ILFP submitted a final mitigation plan and requested the release of 2.157 wetland credits and 300 stream credits for this project.

IL15. Oyster Reef & Saltmarsh Restoration, Nantucket, MA

The Nantucket Conservation Foundation (NCF) was awarded \$84,354 in ILF funds to install an oyster reef in Polpis Harbor and plant saltmarsh grasses to combat loss of salt marsh in an approximately 1.1-acre area around Medouie Creek due to erosion and vegetation dieback. The reef consists of three linear reef structures covering approximately 160-180 linear feet and occupies approximately 0.17 acres of intertidal habitat in the ILFP's Coastal-South Service Sub-Area. NCF will also monitor the adjacent 15.7 acres of saltmarsh for purple marsh crab and vegetation dieback and implement trapping and replanting plans as needed over the course of the project to mitigate threats to the success of the restoration. NCF purchased and seeded the oyster castles in the spring of 2021 and installed them at the project site in the fall after the required permits were obtained. The ILFP requested the release of 0.0775 wetlands credits, representing 30% of the total potential 0.258 wetland credits, for the implementation of the project. A 2022 monitoring report will be submitted to the Corps under separate cover.

IL16. Pye Brook Weir Removal, Topsfield, MA

The Ipswich River Watershed Association (IRWA) is working with the Town of Topsfield to evaluate the feasibility of removing a concrete weir on Pye Brook that is backing up water on wetlands upstream and restricting fish passage. Removing the weir will restore natural hydrology and vegetation in 12 acres of freshwater marsh and enhance more than 25 acres of adjacent freshwater swamp in the ILFP's Coastal-North Service Sub-Area. IRWA and the Town are hiring a consultant to conduct hydrologic and hydraulic analysis of the site in 2023. IRWA will submit a revised funding request to the ILFP if the Town wishes to proceed with removing the weir based on the results of the analysis. The Town of Topsfield Conservation Department owns the upstream wetlands and will provide long-term protection and stewardship of them.

IL17. Eelgrass Restoration, Nantucket, MA

The Nantucket Land Council was awarded \$105,359 in ILF funds to restore two half-acre beds of eelgrass in Nantucket Harbor. Both restoration sites are essential fish habitat (EFH). The eelgrass beds in Nantucket Harbor also support a "wild" bay scallop fishery that is rare in the U.S. The first of three seasons of planting began in the fall of 2022. The final mitigation plan and post-planting report will be submitted to the Corps under separate cover. Restoration success is determined by the persistence and expansion of the planted eelgrass over five years of monitoring.

IL18. Blackwater Memorial Forest Wetland Restoration, Kingston, MA

The Town of Kingston was awarded \$255,138 in ILF funds to restore freshwater wetland and stream resources on a retired cranberry farm. The Town purchased the restoration site in March of 2022 and is conveying a CR to Wildlands Trust. The CR has been submitted to the MA Executive Office of Energy and Environmental Affairs for review before recording. The Town has hired a consultant to help them prepare design plans and apply for permits for the restoration project. They expect to submit a draft mitigation plan for review in early 2023.

IL19. Barnstable Great Marsh Restoration, Barnstable, MA

Mass Audubon was awarded \$146,000 in ILF funds to restore salt marsh on their Barnstable Great Marsh Wildlife Sanctuary that has been degraded by historic agricultural impacts. Mass Audubon held a workshop on December 1-2, 2022 to kick off this project. They have hired a consultant to help them prepare design plans for the restoration project. They expect to submit a draft mitigation plan for review in spring of 2023.

IL20. Scantic River Preservation, Hampden, MA

Mass Audubon was awarded \$150,000 in ILF funds to acquire and permanently protect a parcel of nearly 60 acres of land including freshwater wetlands and critical habitat for vernal pools along the Scantic River. The parcel is adjacent to Mass Audubon's Laughing Brook Wildlife Sanctuary. Mass Audubon drafted a conservation restriction for the parcel, to be held by the Town of Hampden and expects to submit a draft mitigation plan for review and to close on the property in 2023.

IV. Program Development Update

Mitigation Project Selection - 2022

In 2022, the ILFP conducted targeted outreach within DFG's divisions and programs, to other state agencies, and to municipalities and non-governmental organizations to solicit projects that could specifically meet overdue or upcoming credit obligations. A prospectus was received from a municipal project sponsor in March and published for public notice in May. A request for proposals (RFP) for projects in the Connecticut River and Quabbin Reservoir/ Worcester Plateau service areas was issued in August. Thirteen prospectuses were received in response to the RFP. After conducting site visits with the Corps, the ILFP requested a public notice for four of the projects. Some projects that were identified during targeted outreach were at an early stage of development and may be included in a future public notice.

Mitigation Project Selection - 2023

In 2023, the ILFP will continue to diversify its outreach and identification of priority restoration projects with particular focus on estuarine environments, where most impacts that have paid into the ILFP have occurred. The ILFP has had discussions with several state grant programs about partnering to solicit projects. The ILFP is also partnering with DFG's Division of Ecological Restoration on an effort to identify and prioritize potential freshwater wetland restoration sites.

Standard Operating Procedures (SOPs) for the MA ILFP

In 2021, the ILFP developed SOPs for program administration that address management, financial, and ecological goals. The ILFP shared the draft SOP document with the Corps for review and comment in March 2022. The draft SOPs are part of an Internal Control Plan (ICP), which presents a comprehensive assessment of risks that could impede the achievement of the goals and objectives of the MA DFG ILFP and lays out a set of internal controls and best practices to avoid and minimize those risks. The ILFP SOPs were integrated as part of a DFG-wide ICP in July 2022. ILFP staff will continue to apply the SOPs, re-evaluate on an annual basis and update the SOPs as needed.

Instrument Updates and Amendments

MA DFG is currently in consultation with the Corps regarding a proposed draft Amendment to the ILFP Instrument that would include provisions for potential transfer of small amounts of funds and credits between ILFP Service Areas. Such provisions could be useful, for example, if there has been a low level of credit sales in a Service Area and insufficient funds accrued to implement a mitigation project, or if a small amount of funds remain after all mitigation obligations are met in a Service Area and the funds could be used to support a project in an adjacent Service Area.

DFG also proposed a draft Amendment to the ILFP Instrument that would allow the ILFP to accept payments for impacts to tidal aquatic resources authorized by USACE in Rhode Island because Rhode Island is not currently served by an ILFP.

In 2022, the ILFP began a re-evaluation of the 2014 ILFP Instrument and is developing recommendations for revisions. This work will lay the foundation for preparation and submittal

to the Corps and IRT of a proposed 10-Year Instrument update in 2023, with a view to completing the Corps review and approval process by the Spring of 2024.

Restoration Costs Analysis

DFG began a re-evaluation of restoration project costs, which will help inform potential changes in ILF mitigation credit fees as well as project selection and planning. This work involves organizing, interpreting, and analyzing restoration project data, with a focus on DER projects implemented during the past five years. Tasks include compilation and analysis of cost metrics for various project phases and different types of projects. Ecological metrics will also be analyzed to improve understanding of the costs associated with achieving ecological outcomes for tidal and freshwater projects of different types and scale. A preliminary report on the results of analysis is expected to be complete in June 2023.

V. DMF ILFP Project Updates

This section of the ILFP 2021 Annual Report provides an update on four mitigation projects that were undertaken by DMF prior to the 2014 DFG ILFP Instrument.

Project 1. Off Billington Street Dam Removal Project – Plymouth

As noted in the 2018 ILF Program Annual Report, this project was successfully completed. ILFP funds were used to vegetate the exposed stream banks once the impoundment behind the dam was drained. DFG submitted project monitoring reports and a request for release of credits to the Corps in December of 2021.

Project 2. Rough Meadows - Rowley

This ILF project was completed in 2018. In 2021, the Corps released final credits in the amount of 0.733 wetland credits for this project.

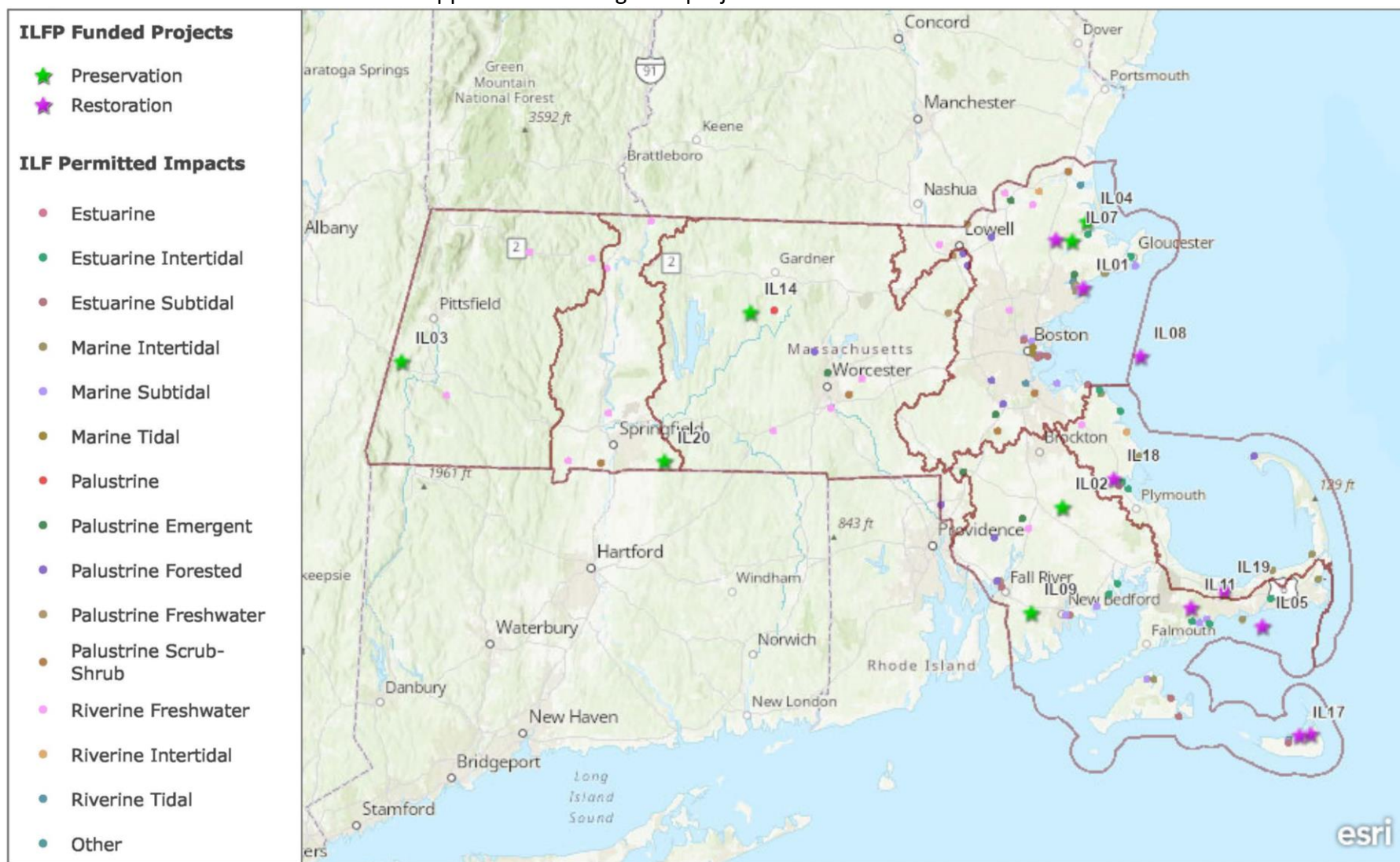
Project 3. Upper Great Marsh – Newbury

In 2018, the Corps released final credits in the amount of 3 wetland credits for this project.

Project 4. Draka Dam Fish Passage – Three Mile River, Taunton

This DMF diadromous fish passage project was successfully completed in 2019. The Corps released 25.5 stream credits for this project in December of 2021. The ILFP received a monitoring report and operations & maintenance plan in December of 2022 and has submitted these to USACE with a request for additional credits to be released. A site inspection will be conducted in 2024 to close out the project.

Appendix A. ILFP Map – Service Area boundaries, locations of impacts for which ILF payments were made¹ and locations of approved ILFP mitigation projects²



¹Includes all ILF payments received by DFG from 5/23/14 – 12/31/2022.

²Three mitigation project proposals were selected for funding in 2022; thirteen mitigation project proposals were previously approved.

Appendix B. Complete Listing of ILF Payments Received and Mitigation Credits Sold

ACOE Permit Number	Permittee	Project location	ILF Required	Fee received by DFG	Resource Type	Wetland credits	Stream credits
Berkshire-Taconic Service Area							
NAE-2014-01945	Tennessee Gas Pipeline Company	Tyringham	\$2,500.00	11/06/14	Riverine Freshwater	0.00	8.33
NAE-2015-01572	MassDOT-Highway Division	Shelburne	\$13,800.00	12/09/16	Riverine Freshwater	0.00	46.00
NAE-2020-00432	MassDOT-Highway Division	Charlemont	\$6,300.00	08/10/20	Riverine Freshwater	0.00	21.00
	Subtotal	Berkshire	\$22,600.00			0.00	75.33
Coastal Service Area_Central sub-area							
NAE-2006-03754	Town of Scituate	Scituate	\$99,820.00	09/08/15	Estuarine Intertidal	0.16	0.00
NAE-2016-01044	MassDOT-Highway Division	Norwell	\$38,400.00	12/09/16	Riverine Freshwater	0.00	64.00
NAE-2016-01044	MassDOT-Highway Division	Norwell	\$173,926.00	12/09/16	Palustrine Forested	0.28	0.00
NAE-2008-01239	Michael Solimando	Scituate	\$1,711.20	03/16/17	Marine Intertidal	0.00	0.00
NAE-2006-04281	Provincetown Airport Commission	Provincetown	\$269,777.81	08/01/17	Palustrine Forested	0.43	0.00
NAE-1995-00532	Cohasset Yacht Club	Cohasset	\$2,245.95	10/26/17	Marine Intertidal	0.00	0.00
NAE-2015-02882	Town of Dennis	Dennis	\$39,754.60	10/30/18	Marine Intertidal	0.06	0.00
NAE-2016-01575	MassDOT-Highway Division	Cohasset	\$4,705.80	05/07/19	Estuarine Intertidal	0.01	0.00
NAE-2018-02770	Town of Kingston	Kingston	\$228.16	03/15/21	Estuarine Intertidal	0.000367	0.00
NAE-2021-00399	Town of Duxbury	Duxbury	\$4,911.00 ¹	05/10/21	Marine Intertidal	0.008	0.00
NAE-2021-00677	Kurt Johnson	Kingston	\$513.36	05/28/21	Estuarine Intertidal	0.0008	0.00
NAE-2021-02389	Gary Lawrence	Kingston	\$727.26	2/9/2022	Estuarine subtidal	0.001	0.00
	Subtotal	Coastal_Central	\$636,721			0.964	64.00

ACOE Permit Number	Permittee	Project location	ILF Required	Fee received by DFG	Resource Type	Wetland credits	Stream credits
Coastal Service Area_North sub-area							
NAE-2011-00106	Global Companies, LLC	Chelsea	\$7,500.76	09/11/14	Marine Subtidal	0.01	0.00
NAE-2011-00106	Global Companies, LLC	Chelsea	\$11,764.24	09/11/14	Marine Intertidal	0.02	0.00
NAE-2014-02637	Charles Loutrel	Marblehead	\$2,623.84	05/05/15	Marine Subtidal	0.00	0.00
NAE-2014-00114	Algonquin Gas Transmission, LLC	Salem	\$151,554.00	06/24/15	Marine Subtidal	0.24	0.00
NAE-1999-03185	MA Dept. of Conservation and Recreation	Canton	\$3,000.00	10/14/15	Palustrine Freshwater	0.01	0.00
NAE-2005-01095	City of Salem	Salem	\$2,852.00	01/11/16	Marine Intertidal	0.01	0.00
NAE-2004-00525	Nicholas Iselin for Lend Lease Development. Inc.	East Boston	\$5,040.00	04/27/16	Marine Tidal	0.01	0.00
NAE-2015-01169	Lisa Martinez and Chris Williams	Manchester	\$812.00	06/28/16	Estuarine Intertidal	0.00	0.00
NAE-2015-00875	New England Power Company/ National Grid	Andover, Dracut, Tewksbury	\$227,009.00	08/05/16	Palustrine Freshwater	0.37	0.00
NAE-2016-01170	Economic Development and Industrial Corp. of Boston	Boston	\$18,623.00	08/19/16	Marine Subtidal	0.03	0.00
NAE-2013-01026	Wynn MA LLC	Everett	\$48,769.20	12/14/16	Marine Subtidal	0.08	0.00
NAE-2002-02261	Rustom Cowasjee	Boston	\$106,950.00	01/25/17	Marine Tidal	0.17	0.00
NAE-2009-00539	MassDOT-Highway Division	Amesbury, Salisbury	\$50,880.00	02/01/17	Palustrine Freshwater	0.08	0.00
NAE-2016-02158	Arunas Martinonis	Gloucester	\$4,705.00	05/30/17	Marine Subtidal	0.01	0.00
NAE-2017-00101	Massachusetts Port Authority	East Boston	\$4,939.00	06/21/17	Marine Subtidal	0.01	0.00
NAE-2011-001084	Kai Juel, III	Manchester	\$4,791.36	08/03/17	Marine Intertidal	0.01	0.00

ACOE Permit Number	Permittee	Project location	ILF Required	Fee received by DFG	Resource Type	Wetland credits	Stream credits
NAE-2009-001173	Martin Hahn and David Crosby	Manchester	\$5,147.86	08/03/17	Marine Intertidal	0.01	0.00
NAE-2012-00558	Manchester Marine Corporation	Manchester	\$49,339.60	08/14/17	Marine Intertidal	0.08	0.00
NAE-2009-00146	Peter Creighton	Manchester	\$7,557.80	08/14/17	Marine Intertidal	0.01	0.00
NAE-1994-02959	Randy Wood	Manchester	\$1,611.38	08/14/17	Marine Intertidal	0.00	0.00
NAE-2012-00557	Sunset Rock, LLC	Manchester	\$24,997.78	08/14/17	Marine Intertidal	0.04	0.00
NAE-2013-02022	Ledyard McFadden	Manchester	\$2,452.72	08/17/17	Marine Intertidal	0.00	0.00
NAE-2010-02461	Massachusetts Bay Transportation Authority	Boston	\$3,900.00	08/25/17	Riverine Tidal	0.01	0.00
NAE-2013-02187	Eversource Energy	Walpole, Holbrook	\$9,317.00	10/04/17	Palustrine Forested	0.02	0.00
NAE-2013-02187	Eversource Energy	Walpole, Holbrook	\$4,813.00	10/04/17	Palustrine Emergent	0.01	
NAE-2017-00669	MassDOT-Highway Division	Haverhill	\$18,180.00	12/13/17	Riverine Freshwater	0.00	30.30
NAE-2002-02261	Tyler Deaton, 140 Northern Ave LLC	Boston	\$36,134.00	12/20/17	Marine Intertidal	0.06	0.00
NAE-2002-02261	Tyler Deaton, 140 Northern Ave LLC	Boston	\$108,404.00	12/20/17	Marine Intertidal	0.17	0.00
NAE-2005-01170	Beverly Port Marina	Beverly	\$1,426.00	01/22/18	Marine Intertidal	0.00	0.00
NAE-2017-01145	Esty Park Trust	Groveland	\$2,440.00	02/08/18	Riverine Freshwater	0.00	4.06
NAE-2012-00440	Massport	Boston	\$93,963.00	05/08/18	Estuarine Subtidal	0.15	0.00
NAE-2012-00440	Massport	Boston	\$96,255.00	05/08/18	Estuarine Intertidal	0.16	0.00
NAE-2013-02187	Eversource Energy	Walpole, Holbrook	\$427.80	05/14/18	Palustrine Scrub-Shrub	0.00	0.00

ACOE Permit Number	Permittee	Project location	ILF Required	Fee received by DFG	Resource Type	Wetland credits	Stream credits
NAE-2016-00503	Nstar Electric dba Eversource Energy	Needham	\$28,132.00	06/04/18	Palustrine Forested	0.05	0.00
NAE-2009-00539	MassDOT-Highway Division	Amesbury, Salisbury	\$3,351.00	06/15/18	Palustrine Scrub-Shrub	0.01	0.00
NAE-2013-01690	MassDOT-Highway Division	Haverhill	\$14,699.00	06/15/18	Palustrine Emergent	0.02	0.00
NAE-2016-01163	Harbor Electric Energy Company	South Boston, Winthrop	\$594,706.00	06/20/18	Estuarine Subtidal	0.96	0.00
NAE-2017-02473	John Bruni	Ipswich	\$741.52	08/09/18	Estuarine Intertidal	0.00	0.00
NAE-2018-01255	Twig Rush Dock Assoc., Craig Gould	West Newbury	\$1,026.72	08/14/18	Riverine Intertidal	0.00	0.00
NAE-2017-00100	Cronin Holdings LP	Boston	\$7,173.00	09/10/18	Marine Subtidal	0.01	0.00
NAE-2014-01038	Norwood Airport Commission	Norwood	\$122,636.00	10/03/18	Palustrine Emergent	0.20	0.00
NAE-2014-00930	Town of Winchester	Winchester	\$15,000.00	10/12/18	Riverine Freshwater	0.00	25.00
NAE-2010-02461	MBTA	Milton	\$2,000.00	10/15/18	Riverine Tidal	0.00	3.30
NAE-2016-01969	Town of Chelmsford	Chelmsford	\$111,000.00	10/25/18	Riverine Freshwater	0.00	185.00
NAE-2011-00750	Brewer Hawthorne	Salem	\$12,260.10 ¹	10/24/19	Marine Intertidal	0.02	0.00
NAE-2015-02118	MBTA	Boston	\$198,214	01/18/19	Estuarine Intertidal	0.32	0.00
NAE-2015-02118	MBTA	Boston	\$735,816	01/18/19	Estuarine Subtidal	1.18	0.00
NAE-2016-01163	Harbor Electric Energy Company	Boston	\$31,444.00	04/22/19	Estuarine Subtidal	0.05	0.00
NAE-2016-02678	City of Beverly	Beverly	\$2,500.50	01/14/19	Palustrine Emergent	0.00	0.00
NAE-2017-01385	Jack Tatelman	Marblehead	\$9,625.50	06/24/19	Marine Intertidal	0.02	0.00

ACOE Permit Number	Permittee	Project location	ILF Required	Fee received by DFG	Resource Type	Wetland credits	Stream credits
NAE-2017-02272	Tuck Point condominium trust	Beverly	\$1,497.30	10/24/19	Marine Subtidal	0.00	0.00
NAE-2017-02272	Tuck Point condominium trust	Beverly	\$855.60	10/24/19	Marine Intertidal	0.00	0.00
NAE-2018-02229	Michael Settles	Beverly	\$1,140.00	01/14/19	Riverine Tidal	0.00	0.00
NAE-2018-02240	American Yacht Club, c/o Ron Barrett	Newburyport	\$299.46	04/02/19	Riverine Tidal	0.00	0.00
NAE-2019-00897	Heidi Herlihy	Marblehead	\$4,563.20	11/12/19	Marine Subtidal	0.01	0.00
NAE-2016-02013	Town of Andover	Andover	\$73,004.00	03/04/20	Palustrine Forested	0.12	0.00
NAE-2017-00159	City of Quincy	Quincy	\$8,413.40	05/19/20	Marine Subtidal	0.01	0.00
NAE-2009-00716	MassDOT	Dedham, Westwood	\$42,765.74	3/24/21	Palustrine Forested	0.069	0.00
NAE-2013-01925	MBTA	Gloucester	\$228,160.00	01/04/21	Estuarine intertidal	0.377	0.00
NAE-2016-1163-A	Harbor Electric Energy Company	Boston	\$199,240.72	8/24/22	Estuarine subtidal	0.32	0.00
NAE-2013-01925	MBTA	Gloucester	\$19,108.40	10/12/22	Estuarine intertidal	0.031	
NAE-2021-00396	MassDOT	Hull	\$299.46	11/30/22	Estuarine subtidal	0.00048	0.00
	Subtotal	Coastal_North	\$3,587,853			5.536	247.66
Coastal Service Area_South sub-area							
NAE-2014-01583	Mary C. Kariotis	Osterville	\$1,408.00	11/05/15	Marine Subtidal	0.00	0.00
NAE-2002-00169	Great Island Homeowner's Assoc. Inc.	West Yarmouth	\$570.40	11/08/16	Marine Intertidal	0.00	0.00
NAE-2015-00827	US Army Corps of Engineers	Taunton	\$260,890.00	12/21/16	Palustrine Emergent	0.42	0.00
NAE-2014-01348	Robert Benedetto	Cotuit	\$1,369.00	01/25/17	Estuarine Intertidal	0.00	0.00
NAE-2014-01310	Town of Marion	Marion	\$33,539.00	06/29/17	Estuarine Intertidal	0.05	0.00

ACOE Permit Number	Permittee	Project location	ILF Required	Fee received by DFG	Resource Type	Wetland credits	Stream credits
NAE-2008-03185	MassDOT-Highway Division	Somerset, Fall River	\$664,059.00	12/21/17	Palustrine	1.07	0.00
NAE-2014-01547	DFG/Town of Tisbury	Tisbury	\$9,154.92	01/29/18	Marine Subtidal	0.01	0.00
NAE-2014-01547	DFG/Town of Tisbury	Tisbury	\$1,426.00	01/29/18	Marine Intertidal	0.00	0.00
NAE-2017-02648	Jennifer and Edmund Murphy	Osterville	\$2,224.56	03/29/18	Estuarine Intertidal	0.00	0.00
NAE-2017-01115	EM Crosby Boatworks	Osterville	\$4,099.00	05/14/18	Marine Subtidal	0.01	0.00
NAE-2017-01115	EM Crosby Boatworks	Osterville	\$4,099.00	05/14/18	Marine Intertidal	0.01	0.00
NAE-2017-01452	New England Power d/b/a National Grid	Somerset MA	\$105,253.06	05/23/18	Palustrine Scrub-Shrub	0.17	0.00
NAE-2017-01452	New England Power d/b/a National Grid	Somerset MA	\$109,461.19	05/23/18	Palustrine Forested	0.18	0.00
NAE-2009-02719	Fairhaven Shipyard Companies, Inc.	Fairhaven	\$158,785.00	06/04/18	Estuarine Subtidal	0.25	0.00
NAE-2018-01440	Farm Lane Assoc.	South Dennis	\$684.48	10/03/18	Estuarine Intertidal	0.00	0.00
NAE-2017-00160	Brendan Magauran	Orleans	\$2,010.66	08/26/19	Marine Intertidal	0.00	0.00
NAE-2017-01613	Cow Bay Corporation	Edgartown	\$399.28	04/09/19	Estuarine Intertidal	0.00	0.00
NAE-2017-01613	Cow Bay Corporation	Edgartown	\$2,481.24	04/09/19	Estuarine Subtidal	0.00	0.00
NAE-2018-02412	Town of Plainville DPW	Plainville	\$2,695	02/06/19	Palustrine Emergent	0.00	0.00
NAE-2018-02575	US Coast Guard CEU Providence	Nantucket	\$27,771.35	08/19/19	Estuarine Intertidal	0.04	0.00
NAE-2018-03065	Stephen and Carol Milligan	Marion	\$171.12	04/17/19	Estuarine Intertidal	0.00	0.00
NAE-2019-00272	Town of Plymouth	Plymouth	\$4,278.00	10/24/19	Estuarine Intertidal	0.01	0.00

ACOE Permit Number	Permittee	Project location	ILF Required	Fee received by DFG	Resource Type	Wetland credits	Stream credits
NAE-2019-01934	Terje Tonnesen Revocable Trust	Fairhaven	\$4,470.51	10/24/19	Marine Intertidal	0.01	0.00
NAE-2016-02034	13 Shipyard Lane LLC	Mattapoisett	\$1,711.20	11/21/19	Marine Subtidal	0.00	0.00
NAE-2019-02413	NIR Retail LLC	Nantucket	\$16,541.60	09/8/20	Marine Subtidal	0.03	0.00
NAE-2017-02472	MA Office of Fishing & Boating Access	Eastham	\$5,005.00	01/31/20	Marine Intertidal	0.0081	0.00
NAE-2019-00359	MassDOT - Highway Division	Taunton	\$336,718.21	08/31/20	Palustrine Forested, Riverine	0.4078	139
NAE-2010-00684	MA DCR	New Bedford	\$869.86	10/18/21	Marine Subtidal	0.001	0.00
NAE-2021-02779	MassDOT	Fall River	\$27,935.34	3/22/22	Estuarine Subtidal	0.04	0.00
NAE-2015-00386	Town of Nantucket	Nantucket	\$23,735.77	7/30/22	Estuarine Subtidal	0.038	0.00
NAE-2018-02553	Town of Edgartown	Edgartown	\$11,964.14	10/5/22	Estuarine Subtidal	0.019	0.00
NAE-2021-01206	Joseph Baptista	Dighton	\$34,081.00	10/19/22	Palustrine Forested	0.055	0.00
NAE-2019-01888	Tisbury Marine Terminal	Tisbury	\$147,434.14	12/8/22	Marine Subtidal	0.237	0.00
NAE-2019-01888	Tisbury Marine Terminal	Tisbury	\$108,860.84	12/8/22	Marine Intertidal	0.175	0.00
	Subtotal	Coastal_South	\$2,116,156.97			3.261	139
Connecticut River Service Area							
NAE-2014-01772	Tennessee Gas Pipeline Company	Southwick	\$12,500.00	10/24/14	Riverine Freshwater	0.00	41.66
NAE-2013-01364	Exxonmobil Corp.	Greenfield	\$9,000.00	12/09/14	Riverine Freshwater	0.00	30.00
NAE-2011-01510	MassDOT-Highway Division	Chicopee	\$4,530.00	05/08/19	Riverine Freshwater	0.00	15.10
NAE-2018-00162	Tennessee Gas Pipeline Company, LLC	Agawam	\$271,653.19	01/15/20	Palustrine Forested, Scrub-shrub	0.454	0.00
NAE-2015-00422	MassDOT	Northfield	\$36,000	10/20/21	Riverine Freshwater	0.00	120.00

ACOE Permit Number	Permittee	Project location	ILF Required	Fee received by DFG	Resource Type	Wetland credits	Stream credits
	Subtotal	Connecticut River	\$333,683.19			0.454	206.76
Quabbin-Worcester Service Area							
NAE-2005-03968	John D. Noblin/Ledge Hill Development Company LLC	North Attleboro	\$55,235.79	01/13/17	Palustrine Forested	0.09	0.00
NAE-2016-00820	James White	Concord	\$16,810.00	04/12/17	Palustrine Freshwater	0.03	0.00
NAE-2016-02614	MassDOT-Highway Division	Northborough, Shrewsbury	\$60,600.00	05/30/17	Riverine Freshwater	0.00	202.00
NAE-2016-00502	New England Power d/b/a National Grid	Grafton	\$8,128.13	04/25/18	Palustrine Scrub-Shrub	0.01	0.00
NAE-2016-00502	New England Power d/b/a National Grid	Grafton	\$5,231.13	04/25/18	Palustrine Forested	0.01	0.00
NAE-2018-00850	Clealand Blair, Jackson wood Investments, LLC	Holden	\$16,203.32	07/15/19	Palustrine Forested	0.03	0.00
NAE-2019-01032	National Grid	Lowell	\$5,415.45	10/24/19	Palustrine Forested	0.01	0.00
NAE-2019-01730	MassDOT-Highway Division	Hubbardston	\$64,435.00	10/24/19	Palustrine	0.11	0.00
NAE-2021-00312	National Grid	Billerica	\$17,021.77	02/11/21	Palustrine Forested	0.028	0.00
NAE-2021-02102	Bluewater Bay Development, LLC	Charlton	\$106,599.72	4/20/22	Palustrine	0.178	0.00
NAE-2021-02102	Bluewater Bay Development, LLC	Charlton	\$15,000.00	4/20/22	Riverine	0.00	50
NAE-2017-03061	Boston Gas Company dba National Grid	Lowell	\$69,378.38	4/20/22	Palustrine	0.116	0.00
NAE-2021-02091	Town of Millbury	Millbury	\$64,723.22	5/23/22	Palustrine Forested	0.108	0.00
NAE-2021-02091	Town of Millbury	Millbury	\$69,000.00	5/23/22	Riverine	0.00	230
NAE-2018-00633	Banner Worcester Storage, LLC	Worcester	\$33,638.50	12/14/22	Palustrine Scrub-Shrub	0.056	0.00
NAE-2018-00633	Banner Worcester Storage, LLC	Worcester	\$13,935.95	12/14/22	Palustrine Emergent	0.023	0.00

ACOE Permit Number	Permittee	Project location	ILF Required	Fee received by DFG	Resource Type	Wetland credits	Stream credits
	Subtotal	Quabbin-Worcester	\$621,356.25			0.796	482.00
TOTAL ILFP REVENUE*: \$7,318,370						ILFP CREDITS SOLD: 11.012	1,215
<i>*From ILFP establishment in May 2014 through December 31, 2022</i>						Wetland	Stream